

Work Order ID 83128

April-13-12 8:30:30 AM

83128

Page 1

Item ID: D4617-5

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Clamp Body

Start Date: 13/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 20/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/13 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4617

A

100

Cut blanks as per folio

0.00

100

Bandsaw

Memo

0.00

Jeaspa Bandsaw

110

0.00

110

HAAS 1

HAAS CNC vertical machine #1

Memo

MILL AS PER DWG AND FOLIO FB111

FOLIO REV: AA

DWG REV: A

DEBURR

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Required Date: 20/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.00

Quality Control

B.a 12/04/17

4

0

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

4

0

56

12/04/18

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

(4)

HG 12-4-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Setup Start ***NS1***

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Item Name: Clamp Body

Stop ***NS2***

Start Date: 13/04/2012 Start Qty: 1.00

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1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC7-Inspect Chemical Conversion Coat	0.00				4X	✓		M-L 12/04/18
150									
QC	Memo	0.00							
Quality Control									
160	Identify as per dwg & Stock Location: <u>GA</u>	0.00							
160									
Packaging	Memo	0.00							8/26/19
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							12/4/19
Quality Control									

12-01-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Picklist Print

April-13-12 8:30:34 AM

Page 1

Work Order ID: 83128

83128

Parent Item: D4617-5

D4617-5

Parent Item Name: Clamp Body

Start Date: 13/04/2012

Required Date: 20/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 12-04-13 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.250X01.25 0		Purchased	No				f	29.9400		0.263158			

M6061T6B1 250X01 250

**

6061-T6 Bar 1.25 x 1.25

Location

Loc Qty

Loc Code

MAT004

29.94

119318

29.94

1.2 GR 12/04/14

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

ITEM	QTY	P/N	DESCRIPTION
	X	D4617-041	EMERGENCY ESCAPE LADDER
1	1	D4617-043	LADDER WELDMENT
2	4	D4617-045	CLAMP ASSY
3	4	D4618-041	CLAMP ASSY COVER
4	2	D4621-1	DECAL
5	1	D4621-3	DECAL
6	4	D4625-1	TUBE CAP

D4617-045
CLAMP ASSEMBLY
4 PL

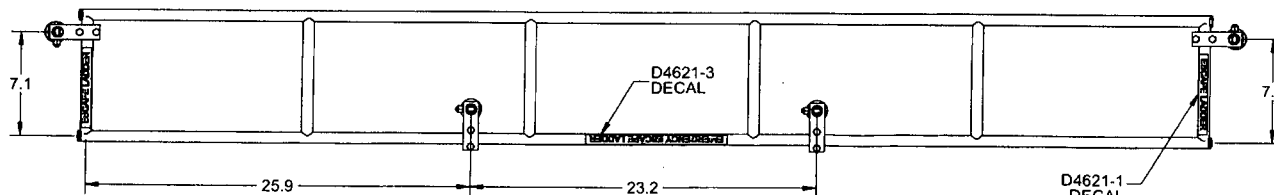
D4618-041
CLAMP ASSY COVER
4 PL
(SHOWN REMOVED THIS LOCATION)

D4617-043
LADDER WELDMENT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 83128
MLJ
12/04/13

D4625-1
TUBE CAP
4 PL


(CLAMP ASSY COVERS REMOVED FOR CLARITY)



D4617-041 EMERGENCY ESCAPE LADDER

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4617-041" AND BATCH NUMBER PER QSI044 6.6
- 7) WEIGHT: 6.46 lbs

A	NEW ISSUE	RP	12.04.02
REV.	DESCRIPTION		BY DATE
DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4617 TITLE EMERGENCY ESCAPE LADDER	REV. A
DRAWN	RP		SHEET 1 OF 1
CHECKED	A.P.		SCALE
MFG. APPR.			NTS
APPROVED			
DE APPR.			
DATE	12.04.02		COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

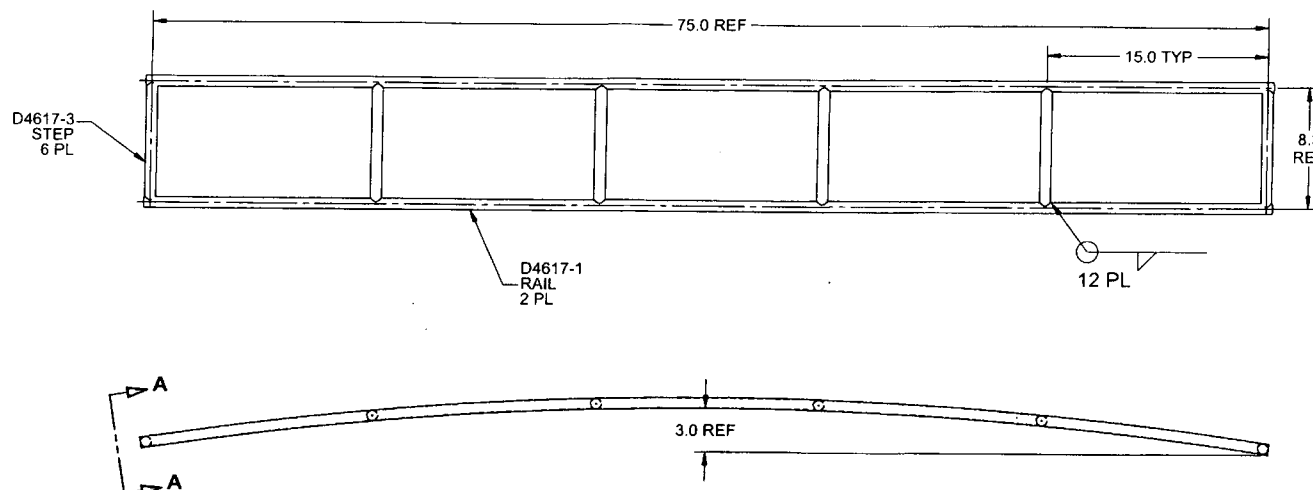
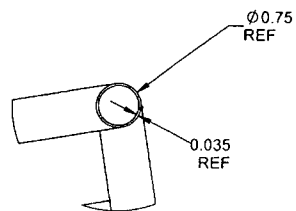
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

83128



D4617-043 LADDER WELDMENT

RELEASED
2012-04-10

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.6
- 7) WEIGHT: 4.5 lbs
- 8) WELDING: PER DART QSI 004

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	RP	DRAWING NO. D4617	REV. A
MFG. APPR.	RP		SHEET 2 OF 5
APPROVED	RP	TITLE	SCALE
DE APPR.	RP	EMERGENCY ESCAPE LADDER	NTS
DATE	12.04.02	<small>COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

W/O:		WORK ORDER CHANGES					
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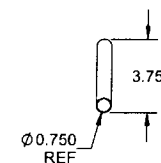
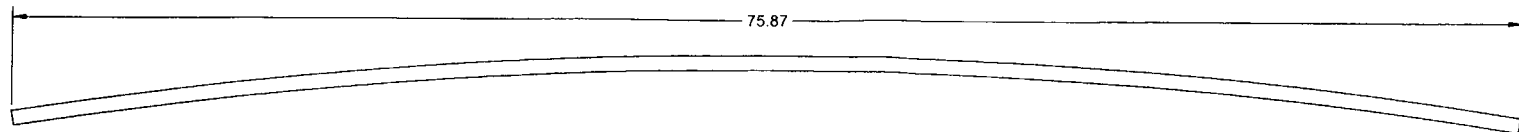
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

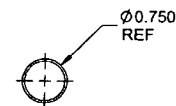
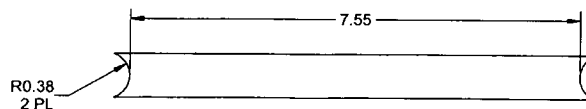
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8312.8



D4617-1 RAIL



D4617-3 STEP

RELEASED
2012-04-18

NOTES:

- 1) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T6736
OR AMS6371, 6360, 6361, 6362, 6373, 6374
REF DART SPEC M4130NT0.750W.035
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: D4617-1 1.7lbs
D4617-3 0.17lbs

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	AP	DRAWING NO. D4617	REV. A
MFG. APPR.	MD	SHEET 3 OF 5	
APPROVED	MD	TITLE	SCALE
DE APPR.	MD	EMERGENCY ESCAPE LADDER	
DATE	12.04.02	NTS	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

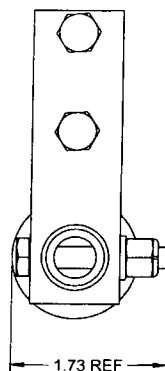
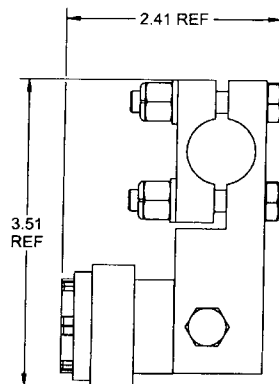
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

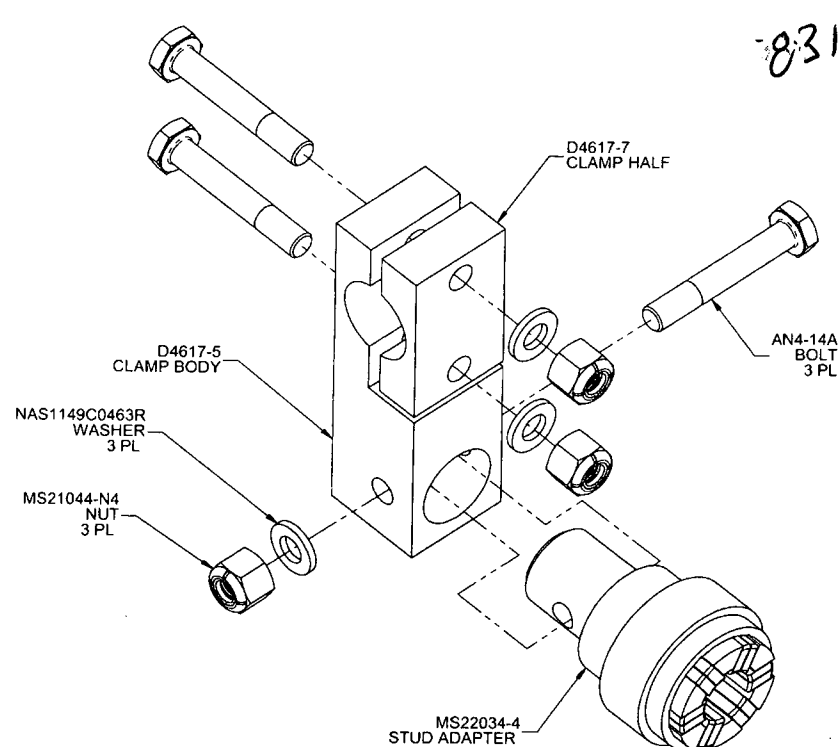
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NOTE: Date & initial all entries

ITEM	QTY	P/N	DESCRIPTION
	X	D4617-045	CLAMP ASSEMBLY
1	1	D4617-5	CLAMP BODY
2	1	D4617-7	CLAMP HALF
3	3	AN4-14A	BOLT
4	3	MS21044-N4	NUT
5	1	MS22034-4	STUD ADAPTER
6	3	NAS1149C0463R	WASHER



D4617-045 CLAMP ASSY



NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: 0.5 lbs

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	D.P.	DRAWING NO. D4617	REV. A
MFG. APPR.	69	TITLE	SHEET 4 OF 5
APPROVED	10/2	SCALE	
DE APPR.		EMERGENCY ESCAPE LADDER	
DATE	12.04.02	NTS	

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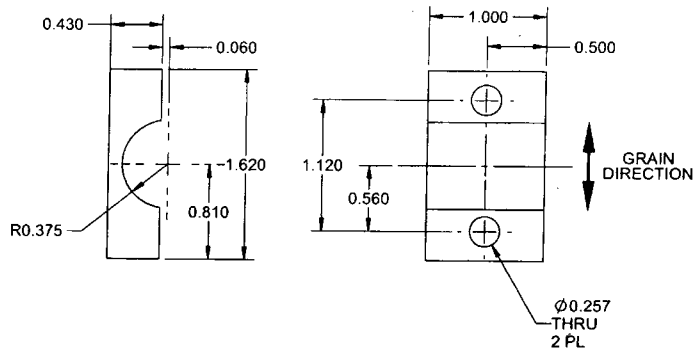
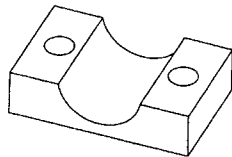
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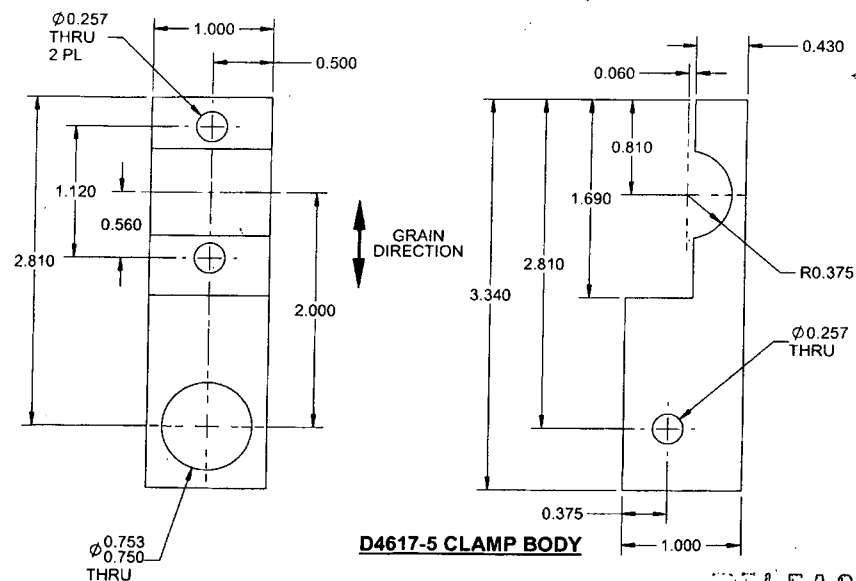
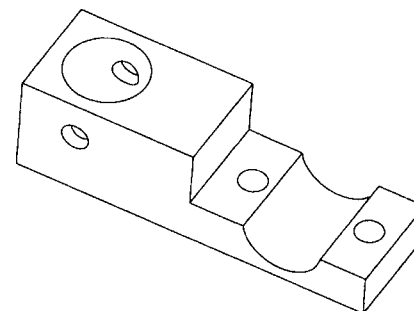
NOTE: Date & initial all entries



D4617-7 CLAMP HALF

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR
AMS 4117/4128/4115/4116 OR QQ-A-200/8
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.6 OR 6.7
- 7) WEIGHT: D4617-5 0.17 lbs
D4617-7 0.05 lbs
- 8) POSSIBLE SUPPLIER: D4617-5: EAGLE P/N 212-110-06
D4617-7: EAGLE P/N 212-110-07



D4617-5 CLAMP BODY

RELEASE
2012-04-10

DESIGN	RP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED		DRAWING NO. D4617	REV. A
MFG. APPR.		TITLE EMERGENCY ESCAPE LADDER	SCALE NTS
APPROVED		DATE 12.04.02	
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NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 83128
Description: CLAMP BODY	Part Number: D4617-5
Inspection Dwg: D4617 Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.500	+/- .010	0.500	✓		Vern	GA-01
1.000	+/- .010	1.001	✓		"	"
φ0.257	+0.006/-0.001	φ0.259	✓		"	"
2.810	+/- .010	2.810	✓		"	"
1.120	+/- .010	1.120	✓		"	"
0.560	+/- .010	0.560	✓		H-6	31006
φ0.750	-0.006/+0.003	φ0.751	✓		Vern	GA-01
2.000	+/- .010	2.000	✓		H-6	31006
0.430	+/- .010	0.430	✓		VERN	GA-01
0.060	+/- .010	0.061	✓		H-6	31006
0.810	+/- .010	0.810	✓		H-6	31006
1.690	+/- .010	1.690	✓		Vern	GA-01
2.810	+/- .010	2.810	✓		"	"
3.340	+/- .010	3.340	✓		"	"
0.375	+/- .010	0.375	✓		"	"
1.000	+/- .010	1.001	✓		"	"
φ0.257	+0.006/-0.001	φ0.258	✓		"	"
R0.375	+/- .010	R0.375	✓		R-6	ref.

Measured by: J.A	Audited by: SC	Preliminary Approval:
Date: 12/04/17	Date: 12/04/18	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15